

SE MRC College Algebra Content Review

Sequences and Summation Notation Section 8.1

Learning Objectives:

1. Find particular terms of a sequence from the general term.
2. Use recursion formulas.
3. Use factorial notation.
4. Use summation notation.

2. Write the first four terms of the sequence whose general term is given.

$$a_n = (-6)^n$$

$$a_1 =$$

$$a_2 =$$

$$a_n = 4n + 2$$

$$a_1 =$$

$$a_3 =$$

$$a_2 =$$

$$a_4 =$$

$$a_3 =$$

$$a_4 =$$

3. Write the first four terms of the sequence whose general term is given.

$$a_n = (-1)^n(n + 1)$$

$$a_1 =$$

$$a_2 =$$

$$a_3 =$$

$$a_4 =$$

4. The sequence shown below is defined using a recursion formula. Write the first four terms of the sequence.

$$a_1 = 15 \text{ and } a_n = a_{n-1} + 2 \text{ for } n \geq 2$$

$$a_1 =$$

$$a_2 =$$

$$a_3 =$$

$$a_4 =$$

5. The sequence shown below is defined using a recursion formula. Write the first four terms of the sequence.

$$a_1 = 7 \text{ and } a_n = 4a_{n-1} + 4 \text{ for } n \geq 2$$

$$a_1 =$$

$$a_2 =$$

$$a_3 =$$

$$a_4 =$$

6. Find the indicated sum.

$$\sum_{j=1}^6 7j$$

7. Find the indicated sum.

$$\sum_{i=1}^6 6i^3$$

8. Find the indicated sum.

$$\sum_{i=4}^8 10$$

Answer Key:

1.	a_1	6
	a_2	10
	a_3	14
	a_4	18
2.	a_1	-6
	a_2	36
	a_3	-216
	a_4	1296
3.	a_1	-2
	a_2	3
	a_3	-4
	a_4	5
4.	a_1	15
	a_2	17
	a_3	19
	a_4	21
5.	a_1	7
	a_2	32
	a_3	132
	a_4	532
6.	147	
7.	2646	
8.	50	